



#### INTRODUCTION



Agriculture is undergoing a gradual shift from dependence on human & animal power to mechanical power because of increased cost to maintain and feed the animal as well as increasing scarcity of human labour. However the Mechanical power is largely used by big land holding farmers and still beyond the reach of small / marginal holding farmers.

Thus there is an urgent and strong need for taking farm mechanization to the small and marginal land holding farmers who hold 80% of total India land holding. They are unable to own high end machine due their economic condition. To bring increase and support mechanisation to this segment there is a need of affordable machinery which can work though out the year with low initial investment and less operational / maintenance cost. This kind of innovative farm machinery package can bring mechanization and also make agriculture more sustainable & profitable. The expanded usage of internet and TV has also influenced the farmers to adapt mechanization.

## **MISSION & OBJECTIVES**



- Increasing the reach of farm mechanization at affordable cost to small and marginal farmers and to the regions where availability of farm power is low.
- Offsetting adverse 'economies of scale' and 'higher cost of ownership' of high value farm equipment by promoting Innovative complete crop solution at affordable initial investment
- Passing on the benefit of hi-tech, high value and hi-productive agricultural machinery to farmers through creating hubs for such farm equipment.
- Promoting farm mechanization by creating awareness among stakeholders through demonstration and capacity building activities.
- Making agriculture as a profitable business.



VST Company has introduced a innovative & affordable complete paddy package for farmers. The package will cover the complete process, the agricultural implements required, the key benefits of using VST Shakti tractors for cultivation and economics of paddy farming from custom hiring through rural young entrepreneurs.



# WHY VST SHAKTI TRACTORS ARE MOST SUITABLE FOR PADDY CULTIVATION



- ➤ A Compact Model-It is India's First Small and 4 Wheel Drive Tractor.
- Light in Weight, 3 cylinder engine and Less Vibration.
- Turning Radius: With Brake 2.1 m; Without Brake 2.5 m
- ➤ Best for Paddy cultivation due to 4 Wheel Drive & light weight with unique rotatory.
- Unique Japanese design at affordable cost, Wide network for Service & Spare parts, Good Resale Value, Less Soil compaction.
- Well known Brand name with decades of good will among the Farmer Community.
- Our Tractors are reliable and built to last. Good track record.

## FIELD PREPARATION



### **CULTIVATOR**

- Rigid / Spring Loaded cultivator is used for tilling soil.
- Depth of cultivation can be adjusted with top link of 3 point linkage
- 5 tynes are provided in both rigid & spring type cultivators
- $0.4 \sim 0.5$  acres can be cultivated in 1 hour with average diesel consumption of  $2 \sim 2.5$  lts / hr of operation





### FIELD PREPARATION



#### DISC HARROW

- This is used to cultivate soil where crops are to be planted.
- Also useful to cut unwanted weeds or crop remainders.
- It consists of steel discs which rotate when the implement is driven by the tractor.
- Discs are not parallel with the direction of the implement. This ensures that the discs will repeatedly slice the field and optimize the results.
- $0.5 \sim 0.65$  acres of field can be prepared in 1 hour with average diesel consumption of  $2 \sim 2.5$  lts /hr







## **IRRIGATION**



### WATER PUMP

- Useful for pumping water from irrigation canals, lakes and wells, etc.,
- Water pumping is through the PTO drive without depending on outside power availability.
- This is very essential where there is water scarcity or less rainfall.
- Crops can be safe guarded with timely supply of water.
- A 4 x 3 Centrifugal pump is recommended with an output of 1000 lts / minute





#### **IRRIGATION**



#### **GENSET**

- Robust stand provided to take the weight of alternator and absorb likely vibrations.
- Stand can be carried with the tractor using 3 point linkage.
- This is driven by the PTO shaft of the tractor.
- Propeller shaft and universal joints are provided with the alternator and stand
- Power generation up to 9 KW, 240 volts
- Engine speed 1500 rpm
- Alternator Is suitable both for resistive & connected loads
- Height of the stand is adjustable with the field conditions.





### **IRRIGATION**

#### **PUDDLING**



#### Rotavator

- Simple in construction but with strong design, appropriate for medium soil conditions
- The application includes : Soil conditioning, weed control, seedbed preparation and puddling in wet land
- 28 tynes can be fitted J type for wet and L / straight for dry land.
- 0.3 ~ 0.45 acres of land can be covered in 1 hr
  with average diesel consumption of 2.25 ~ 2.5 lts / hr
- Depth of Tilling is 100 ~ 125 mm.
- 2 models are available with 900 & 1100 mm width



#### **Lugged Wheel**

- Lugged wheels are effective implements for tractors to meet the challenges encountered in the wet field
- Sturdy Construction
- Bigger lugs
- · Decreases load on tractor
- Helps to improve traction performance



## **TRANSPLANTING**



- Yanji Shakti Paddy transplanter is designed for simultaneous transplanting 8 rows of seedlings in a single pass.
- This is suitable to handle both Mat type & Tray type nurseries.
- It is fitted with Light weight 4 HP single cylinder air cooled engine running on diesel.
- Even women can operate very easily.
- $0.3 \sim 0.5$  acres can be covered in 1 hour of working
- Row to row spacing is 238mm
- Average diesel consumption is  $0.4 \sim 0.5$  lts / hr of working
- Seeding rate per acre ~ 12 14 kgs depending on seed variety and plant to plant spacing.





### **HARVESTING**

#### REAPER



- Front mounted reaper is the best replacement for manual harvesting.
- Reaper mounted at the front of the tractor is driven through a long shaft connected to PTO shaft of tractor.
- Reaper cuts the crop  $5.08 \sim 7.62$  cms above the ground level.
- Width of the cut is  $120 \sim 150$  cms and is very economical in operations.
- The cut crops are carried to the right side of the tractor operator by a conveyor belt.
- 0.5 ~ 0.65 acres can be covered in 1 hour which saves labour and time in comparison to manual harvesting
- Average diesel consumption is 2 ~ 2.5 lts / hr of operation
- Cut crops are collected manually.



#### **HARVESTING**



#### **AXIAL FLOW THRESHER**

- Manual threshing of paddy by standing at a height is replaced with thresher coupled to the tractor
- Post threshing the grains are collected in a tray / bag.
- Grains come out cleaned after passing through a sieve and fan.
- Straws are thrown out to  $6 \sim 12.2$  meters away with the help of a powerful fan.
- 2 blowers are commonly available in all the models, additional fan will be provided on request for very fine cleaning.
- 1500 kgs per hour is the grain output.
- Average diesel consumption is 2.25 ~ 2.5 lts / hr of operation.
- Threshers are fitted with pneumatic tyres for easy transportation.
- A platform is provided for a person to stand and feed.





### **HARVESTING**

#### ROUND BALER



- Baler is used in medium and large fields to avoid labour and save time.
- When compacted it is easy for handling, transportation & storage.
- After compressing the hay the cylindrical bale can be strapped using twine or thread.
- These bales can then be shifted to big dairies to feed the cattle.
- Eliminates laborious picking, stacking and packing by humans
- Less time consuming and efficient
- 40 bales can be prepared in an hour.
- Fuel consumption is 1.5 lts / hr of operation
- Baler is operated connecting to PTO shaft of the tractor at 540 rpm





# **HAULAGE**



Trailer of 3 tons capacity can be fitted for transportation.

Primarily required for transporting manure, chemicals, implements, sacks of rice etc.

#### Types of Trailers:

- Standard 2.43 x 1.37 x 0.61 meter (L x W x H)
- Mechanical Tipping
- Garbage trailer for collection of garbage &transportation.
- Water tanker of capacity 2000 ltrs can be fitted for carrying drinking water.
- Average consumption of diesel is 2.5 lts / hr





### TRACTOR MANUFACTURING PLANT AT HOSUR



#### V.S.T. TILLERS TRACTORS LTD.

(CIN-L34101KA1967PLC001706)

Hosur Plant: Plot No.39, Phase-1, Sipcot Industrial Complex, Mookandapalli, HOSUR – 635 126, Tamil Nadu.

Phone: 91-04344-275578 Email: vstgen.hosur@vsttillers.com

Regd. Office: Plot No. 1, Dyavasandra Indl. Layout, Whitefield Road, Mahadevapura Post, Bangalore – 560 048.

Ph: 91-80-67141418 /23, 67141111, Fax: 91-80-28510221

www.vsttillers.com

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